## B

This game "Block it" utilizes arrays, so it's great for multiplication, division, and area practice. It can have variations depending on the level of your students.

## Materials needed:

1. 1 grid paper ( $1 / 2^{\prime \prime}$ is great)
2. 2 players
3. Each player needs 1 crayon or colored pencil (light colored). Different color per player.
4. 2 number cubes or dice ( 6 sided).


## How to play:

1. Player 1 rolls the dice. Let's say a 3 and 4 are rolled. The player makes a $3 \times 4$ "block" or array. Be sure to show them how to use the lines on the grid paper to make this (as I discovered it's not always clear to some students). Color it in with crayon. Inside the block, write the product (12).
2. Player 2 then rolls the dice and uses their 2 numbers to create another block, colors it, labels it, etc.
3. Repeat
4. The goal is to create as many blocks / arrays as possible (more than the opponent). There is a strategy to maximize the use of the space. Repeated play helps children see they need to consider this so they don't end up with little unusable spaces.
5. As the board gets more full (with less places to fill in), players may have to miss a turn or roll again.

## Variations:

1. As the board gets filled up, students may need to think of alternate ways to make their blocks to fit the available space. For example, if the player rolls a 6 and 4 but there is no room to fit a 6 by 4 array, they can think of other ways to make an array of 24 that might work (such as $8 \times 3,12 \times 2$ ). So, knowledge of all the common factors is helpful.
2. Students can keep track of their score by keeping a running total of each block / array they make.
3. Use smaller size grid paper and use 9,10 , or 12 -sided dice.
4. Write the fact family members for each block created.
5. Play again to practice more strategic placement of blocks.
